SORE Evaporative Certification FAQ's
(Ref: Article 1, Chapter 15, Division 3, Title 13 CCR)
(Revised 5/22/06)

1. Engine and Equipment Certification

1-1. Is the certification holder liable if an end user modifies the evaporative emission system?

Response: No. However, the end user is prohibited from tampering with certified control systems pursuant to California Health and Safety Code Section 43008.6.

1-2. Are vapor lines (line connecting the tank vent to a carbon canister) required to meet the 15 g/m^2/day permeation standard?

Response: No.

1-3. Do vapors from the carburetor need to be controlled?

Response: There are no specific requirements to control emissions from the carburetor. However, controlling the emissions from the carburetor will provide a greater margin of compliance.

1-4. Does a manufacturer need to describe how running loss emissions are controlled in a certification application? What if the manufacturer installs a carbon canister that meets the requirements in the regulations?

Response: Yes. In any case where a manufacturer applies for engine and equipment certification and uses a carbon canister that meets the requirements of the regulations, the manufacturer must still provide an engineering description of the evaporative emission system as part of the certification application. The description should describe how vented tank emissions are prevented from being emitted into the atmosphere during engine operation.

1-5. What criteria will ARB utilize for determination of fuel cap acceptance?

Response: In the certification application, the manufacturer must describe how their fuel cap meets the performance standards in Section 2756. The description should include an evaluation of how a vapor seal is established. Fuel caps used on systems that pass a diurnal performance test are considered compliant with the vapor seal requirement.

1-6. Can engines or equipment be certified with the engine family name and the 2 letter evaporative code that is independent of the exhaust engine family name?

Response: Yes. Manufacturers can use an integrated exhaust and evaporative label with the last two characters of the exhaust family code representing the evaporative family.

1-7. What level is being certified for an evaporative family certified to performance standards, the Evaporative Model Emission Limit (EMEL) or Evaporative Family Emission Limit Differential (EFELD)?

Response: The EMEL and EFELD are only applicable when a manufacturer is participating in the averaging and banking provisions of section 2754.1. When a manufacturer chooses to certify engines using the regulatory provisions for averaging and banking, the level being certified is the EFELD and not the EMEL. If ARB were to test any engine within an evaporative family, no engine could be closer to its respective standard than the EFELD calculated from the EMEL for the worst case engine or equipment.

1-8. How do the effective dates of the evaporative and exhaust emission regulations interact for cases where the engine manufacturer is the exhaust EO holder and the equipment manufacturer is the evaporative EO holder? For example if an OEM certifies and produces a product in their 2008 model year, can that product be built with an engine certified and built by the engine manufacturer in the 2007 model year?

Response: For equipment manufactured prior to or during a specific model year, the engine or equipment must comply with the respective exhaust and evaporative standards in effect for that model year in which it was produced. In the example described above, as long as the 2007 model year engine was compliant with the 2007 model year exhaust standards, and the 2008 model year equipment is compliant with 2008 model year evaporative requirements, a 2008 model year evaporative certification could be issued for the equipment.

1-9. Do carbon canisters need to be used on systems with pressurized non-vented fuel tanks?

Response: No. The regulations do not specify the technology that must be used.

1-10. Does a running change need to be submitted if the OEM puts an "Equivalent Fuel Tank" or “Equivalent Fuel Line” on the engine?

Response: Yes. Any changes to a certified evaporative emission control system will require the certification holder to submit a running change request.

1-11. Can "running losses" be redirected back into the intake manifold as opposed into a carbon canister?

Response: Yes, running loss emissions that are combusted are considered controlled.

1-12. Does the small production volume tank exemption apply to engines less than 225 cc in displacement?

Response: No. The staff report and the final statement of reasons clearly describes ARB's intent to only allow the exemption for engines greater than or equal to 225 cc.

1-13. Do diesel engines need to be counted in the total of models sold in California when qualifying for a small production volume tank exemption?

Response: No. Compression-ignited engines are not regulated in the small off-road engine regulations.

1-14. What do manufacturers of equipment meeting the small production volume exemption in Section 2766 need to do to be compliant with the regulations prior to the 2010 model year?

Response: Manufacturers meeting the small production volume exemption in Section 2766 must certify equipment annually pursuant to Section 2753 (d). However, equipment is not required to be configured with low permeation fuel hoses and carbon canisters until model year 2010.

1-15. Can a manufacturer omit the evaporative code from the label on engines and equipment for model years when only a low permeation hose is required?

Response: Yes. For the model years when only a low permeation hose is required, the manufacturer can omit the evaporative code from the label. However, the label must still contain an unconditional statement of compliance.

1-16. In Table 1 of Section 2754 for the displacement category > 225 cc, there is an effective date of 2010 with a reference to footnote 4. The reference is not in the regulations. Please clarify.

Response: Footnote 4 was inadvertently removed from proposed 15-day modifications, published May 14, 2004, when the regulations were finally approved by the Office of Administrative Law. The footnote read as follows: "[4] Applies to small production volume tanks exempted pursuant to section 2766."

1-17. What is an evaporative family? Where is it defined?

Response: An evaporative family includes engine or equipment models that share similar fuel systems, engine designs, and emission control features such that the equipment can be expected to exhibit similar evaporative emission characteristics. It is noted in CP-902.

1-18. Can a manufacturer use more than two characters for the evaporative family codes as required by CP-902?

Response: Yes. However, the first two characters of the evaporative family code must be as specified by CP-902.

1-19. Is certification required for generators that are fueled from the fuel tank of an on-road motor vehicle?

Response: Yes, 13 CCR Section 2753 (d) applies.

1-20. For motor homes that are sold with generators less than 19 kilowatts, does the effective date apply to the model year of the motor home chassis or the model year of the generator?

Response: The effective date applies to the model year of the generator.

1-21. What is the maximum time for the issuance of an Executive Order of Certification?

Response: 120 days.

1-22. How does a manufacturer submit data?

Response: Data should be submitted using Filemaker Pro template forms created by OPEI. Since the ARB does not use Filemaker Pro, hardcopies must be submitted to ARB for processing.

1-23. In the year(s) you are required to meet fuel hose permeation standard only, what will the Evaporative Family Code be?

Response: In years that you are required to meet fuel hose permeation standards only, the evaporative family code can be omitted from the label. However, the label must still contain an unconditional statement of compliance for evaporative emissions.

1-24. Are chainsaws 45 cc and greater less than 25 hp (19 kW), presumed to be construction or farm equipment and therefore preempted, still preempted?

Response: Yes.

1-25. How can you measure the internal surface area for irregular tanks?

Response: Good engineering practices are used to calculate surface areas for irregular shaped tanks.

1-26. Do you have to repeat preconditioning when conducting a retest or confirmatory test if the original test results indicate marginal compliance?

Response: The retest must be performed on the same engine and/or equipment that generated the original test results. No additional preconditioning is required if the fuel system has continuously contained fuel subsequent to the original test.

1-27. The manufacturer does not want to specify Date of Manufacture (DOM) on the emissions label and instead use a serial number, which he says, can be used to identify the DOM if necessary. Would this be acceptable?

Response: 13 CCR Section 2759 (h) applies here. Although ARB can approve alternate labels, the manufacturer must have the DOM listed on the emission label.

1-28. Alternatively, can the manufacturer specify the DOM on a separate decal placed adjacent to the evaporative label?

Response: See answer to #1-27.

1-29. For MY 2006, would "Fuel Hose" be acceptable under the emission control system portion of the evaporative label or could it be left blank?

Response: 13 CCR 2759 (c)(4)(C) applies here. Fuel hose should be acceptable for 2006 MY equipment.

1-30. Can a manufacturer opt to report only the base engine/equipment model(s) in the Model Summary page (A-9) of the certification application?

Response: Yes. A manufacturer may report just the base engine/equipment model(s), provided all variations of the base model are equipped with identical evaporative controls. The naming convention for base engine/equipment model(s) reported must contain sufficient common identifiers to associate specific model variation to its appropriate base model.

For design based certification, manufacturers must report the component(s) (via reporting the component Executive Order number) associated with each engine model in the Model Summary page of the certification application.

1-31. Why does ARB need detailed information on fuel line length and diameter for all engines used by an OEM?

Response: ARB uses the detailed information for emissions inventory calculations.

1-32. When will the fuel line between the fuel pump and filter (if supplied by a manufacturer) need to comply with the low permeation requirement?

Response: Not until the 2006 engine manufacturer model year.

1-33. When the evaporative certificate holder is not the manufacturer of the finished product, can the certification submission define the worst case configuration that is being certified?

Response: The certificate holder is responsible for communication to the producer of the finished product for terms of the compliance with the Executive Order. The finished product can include configurations that emit at lower levels (e.g. smaller fuel tanks, larger capacity canisters) than the worst case tested and documented in the certification submission.

1-34. How is the HP determination (SORE or LSI engines) determined?

Response: The engine manufacturer declares the maximum power rating in the exhaust certification submission.

1-35. Does nominal fuel tank capacity include un-useable volume?

Response: No, nominal fuel tank capacity excludes un-useable volume.

1-35. Should all emissions related and emissions critical components be labeled?

Response: Yes. According to 13 CCR 2759(a), emissions related and emissions critical parts must be properly labeled in order to identify equipment that meets applicable evaporative standards.

2. Component Certification

2-1. Is there a formal application format for component certification?

Response: No. A manufacturer needs only to provide a letter, signed by an authorized Company representative, requesting component certification.

2-2. What information is required in a component certification application?

Response: In general, 13 CCR Section 2767.1 requires the manufacturer to submit supporting documentation that quantifies the emissions data from 5 component samples, including the test method(s) used to generate the data. The manufacturer needs to provide this information in a letter on company letterhead to ARB requesting component certification. An authorized company representative must sign the letter. The manufacturer should also submit a sample of the component, drawings, installation and maintenance instructions, and identify limits or conditions on component usage. The manufacturer may elect to provide additional information regarding the materials used in the design and construction of the component. The following requirements are specific to each type of component. Deviation from these requirements constitutes an alternative test procedure and requires pre-approval.

Fuel Hose Component Certification

- Fuel hoses tested must have the smallest inside diameter for the production range;
- Testing must be conducted at a constant 40°C, or higher;
- Test fuel used must be Cert fuel, Indolene, CE10, or CM15; and
- Permeation rate must be measured following SAE J1737.

Fuel Tank Component Certification

- Fuel tanks tested must have the smallest ratio of tank volume to internal surface area for the production range;
- Testing must be conducted at a constant 40°C;
- Test fuel used must be Cert fuel or Indolene; and
- Permeation rate must be measured following TP-901.

Carbon Canister Component Certification

- Working capacity must be measured following TP-902, including durability testing prior to measurement of working capacity;
- Canister must be loaded with butane mixed 50/50 by volume with air or nitrogen; and
- Manufacturer must specify the largest tank from which the carbon canister can control vapors and still meet the performance requirements in TP-902.

2-3. Are component certifications required on an annual basis?

Response: No. A component Executive Order is valid until revoked.

2-4. Can a manufacturer submit an application for a component Executive Order with fewer than five data points?

Response: No. Section 2767.1 specifically requires a minimum of five data points.

2-5. Are component certifications provided on a family basis or on an individual part basis?

Response: An Executive Order can be issued for an individual component or for a range of component sizes. The manufacturer must specify the range in the request for component certification along with the minimum barrier thickness.

2-6. What is the basis and rationale for the multiple data points required for component based certification?

Response: Section 2767.1 requires the manufacturer to submit emissions data from a minimum of 5 component samples. Multiple data points for a component that shows compliance with specified performance requirements provides the ARB with a greater assurance that the component will perform as intended.

2-7. What statistical criteria will ARB use to evaluate component data?

Response: For component certification under Section 2767.1, ARB requires that emissions data from each of the five samples comply with the specified performance requirement. ARB will ensure that each data point is below the specified requirement and that the specified test method was used.

2-8. If test data for a fuel line is generated above 60 Degrees Celsius, does the data still need to be below 15 $g/m^2/day$?

Response: Yes. The fuel hose permeation requirement is not lowered when data is generated at test temperatures greater than 60 Degrees Celsius.

2-9. On the evaporative warranty statement, can a manufacturer list different manufacturer/distributor names and contacts of manufacturers that sell their products as long as the remainder of the warranty is unchanged? For example, Company A sells an equipment model through Company B. Company A is the primary manufacturer but wants to use a contact at Company B in the warranty statement for the warranty contact. Is this acceptable? Please also note that 13CCR Section 2759(c)(4)(B) allows for this on the equipment labels.

Response: This is acceptable; however, the manufacturer applying for certification will ultimately be responsible. In other words, if Company A is the certification holder, but Company B's name is on the Warranty Statement, ARB will hold Company A responsible.

2-10. In field S9 of the Model Summary in the Certification Database Form, can the nominal fuel line lengths be grouped into increments of ±3 inches (76mm) as shown in an early draft of the guidance document? Footnote is missing in the September 2005 draft of guidance document.

Response: Yes, it will be included in the next draft of the Certification Guidelines.

2-11. What does the warranty cover and who is responsible?

Response: The warranty covers the evaporative emission system components. The EO holder is responsible for all components. (Ref. part 2764 of the regulation)

2-12. What is the length of time given to engine manufacturers and OEM's to change over if a design based component manufacturer has their EO revoked?

Response: They will be able to continue to use the component through the model year. If it occurs late in the model year, issues may arise and effected manufacturers can apply for hardship relief in those cases.

3. Test Procedures

3-1. Can I submit data generated with a modification of the test procedure?

Response: Any alternative test procedure shall only be used if prior written approval is obtained from the ARB. In order to secure the ARB's approval of alternative test procedures, the applicant is responsible for demonstrating to the ARB's satisfaction that the alternative test procedures are equivalent to the required test procedures. Alternative test procedures may be submitted to the following address:

California Air Resources Board
Monitoring Laboratory Division
P.O. Box 2815
Sacramento, CA 95812
Attn. Division Chief

3-2. Can I use Indolene as a test fuel in TP-901?

Response: Yes, ARB will accept data generated with Indolene Clear as referenced in 40 CFR 86, Section 113-94(a)(1).

3-3. Can I use a different test fuel than those specified in the SORE regulations?

Response: Manufacturers may only use a different test fuel if pre-approved by the Executive Officer as part of an alternative test procedure.

3-4. When conducting SHED testing, can we test the engine without chassis?

Response: Yes, the engine with complete evaporative emission control system can be tested without the equipment chassis.

3-5. Where should the canister be located when conducting a SHED test without the chassis?

Response: The canister should be positioned in a position comparable to where it would normally be found on equipment.

3-6. Does the engine need to be placed under a load during engine warm-up prior to the hot soak portion of the test procedure?

Response: No. The engine or equipment must simply be operated for 15 minutes prior to hot soak.

3-7. How is the worst case tank determined (as required for testing in TP 901)?

Response: It is the tank with the most surface area for tank volume (Tank Volume/ Surface Area = lowest number).

3-8. Are the provisions for accelerated soaking as higher temperatures identified in TP-902 available for tank permeation testing as identified in TP-901?

Response: Yes, the same provisions apply to TP-901.